2011 U.S. Air Force Civil Engineering

GeoBase Strategy Document

Build to Last...Lead the Change

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FOREWORD

This strategy document codifies the mission, vision, goals, and objectives of the GeoBase Program. It charts a course for the program's continued operation and development and lays out a focused, yet flexible path forward. The path may prove difficult at times, but it is achievable; and most importantly, it will have a wide and positive impact. Executing this strategy is not a discretionary activity; it is necessary action to support the U.S. Air Force Civil Engineering (CE) and Air Force (AF) Strategic Plans and the Department of Defense (DoD).

GeoBase has a strong and respected history as an AF mission enhancer. It has been an official CE capability that provides current, accurate, and timely geographic and spatial (geospatial) information since 2001. When linked with other mission business data, the program's geospatial information provides location-based geospatial context. It enhances mission-related situational awareness and helps AF leaders make the best possible mission decisions.

Since the GeoBase program's beginning, much in the world has changed. Various technologies employed by GeoBase have shifted. More importantly, AF and CE organizational structures and processes have transformed to emphasize asset management and installation sustainability. GeoBase has supported much of this change, but has itself remained relatively stable.

With so much change surrounding GeoBase, the GeoBase office at Headquarters Air Force (HAF) determined to take an introspective look at the program. In the fall of 2009, HAF GeoBase initiated a comprehensive strategy review and development effort that culminated in this document. This document is a product of the combined inputs and efforts of numerous stakeholders and experts from base and Major Command (MAJCOM) levels through HAF and beyond. HAF GeoBase canvassed geospatial program leaders from CE, HAF, the Military Services, the Office of the Secretary of Defense (OSD), Federal Agencies, and the geospatial industry for insight to advance the GeoBase program. The GeoBase Panel (a group of GeoBase experts representing each Command) drew upon the research findings to shape a comprehensive strategy that supports far-reaching initiatives. For example, GeoBase will provide authoritative geospatial data for CE's fourteen capabilities covered in CE's NexGen IT initiative, A4/7's Expeditionary Site Selection, Command and Control Common Operating Pictures, and other emerging capabilities while remaining synchronized with DoD's geospatial efforts.

To meet current and emerging requirements, the GeoBase program will pursue five Goals. GeoBase will:

- Provide a standard yet agile AF program to support the warfighters' unique, emerging needs in both the expeditionary and garrison environments
- Create, enforce, and maintain geospatial data standards through quality assurance
- Develop a geospatial enterprise architecture that achieves increased utility and savings
- Obtain adequate resources to sustain and improve geospatial capabilities
- Ensure customers and stakeholders recognize the value of GeoBase and leverage program capabilities to achieve seamless mission integration.

By achieving these Goals, GeoBase will realize a vision of acceptance and accessibility across the AF, for a program that provides structured geospatial capabilities for a full range of mission applications.

Major General Timothy A. Byers
Air Force Civil Engineer

EXECUTIVE SUMMARY

MISSION: Provide geospatial capabilities for efficient decision making across the full mission spectrum

GeoBase supports Civil Engineering (CE) and the Air Force (AF) by providing current, accurate, and timely satellite and aerial imagery and map data representing real-world features and conditions for AF installations, ranges, and property. When linked with other mission business data, the program's geospatial information provides location-based geospatial context. It enhances mission-related situational awareness, which helps AF leaders make the best possible mission decisions.

VISION: A widely accepted and accessible program providing structured geospatial capabilities for a full range of mission applications

Achieving the GeoBase vision will enhance mission accomplishment through delivery of improved GeoBase program capabilities. The Vision describes a program that is universally relied upon for its broad and robust expeditionary and garrison support of the warfighter.

GOALS

To accomplish its mission and achieve its vision over the next 3-5 years, GeoBase has adopted five goals.

- **Goal 1:** Provide a standard yet agile Air Force program to support the warfighters' unique, emerging needs in both the expeditionary and garrison environments
- Goal 2: Create, enforce, and maintain geospatial data standards through quality assurance
- Goal 3: Develop a geospatial enterprise architecture that achieves increased utility and savings
- Goal 4: Obtain adequate resources to sustain and improve geospatial capabilities
- Goal 5: Ensure our customers and stakeholders recognize our value and leverage our capabilities to achieve seamless mission integration

Objectives associated with each of the five goals further define the desired outcomes of the GeoBase Strategy. The Mission, Vision, Goals, and Objectives constitute the core elements of the GeoBase strategy. They align program development, resource allocation, and service delivery to the AF and CE missions.

EXECUTION INFORMATION

The Information Technology Branch (AF/A7CRT) has overall responsibility and oversight for the GeoBase strategy. The GeoBase Panel, authorized under the CE Governance Structure, submits recommendations to AF/A7CRT to define, implement, and achieve GeoBase Strategy Goals and Objectives. Working Groups commissioned by the GeoBase Panel ensure achievement of each of the five GeoBase program goals.

MISSION

"Provide geospatial capabilities for efficient decision making across the full mission spectrum"

At its core, GeoBase exists to provide relational information and data that enables contextual visualization of AF assets. The result is improved use and management of those assets. More than just making and producing maps, the GeoBase mission involves tightly integrated cross-functional collaboration across the AF. It includes efficient and timely collection, creation, maintenance, management, exposure, analysis, and visualization of geospatial information to enable and support the CE mission and ensure broader AF mission success.

CE manages the AF's built and natural assets throughout their lifecycle (planning, acquiring, sustaining, managing, operating, and divesting). GeoBase supports all aspects of asset management by providing and associating geospatial information with CE business data. This geospatially associated (or geoenabled) data presents a complete picture that provides decision makers with greater mission context and better understanding of AF assets according to their location on the earth and physical relation to one another. For example, many other AF programs rely on geospatial, location-based decision support information for a multitude of siting requirements including Automated Explosives Safety Site Planning and Expeditionary Site Selection.

Road Condition Viewer
90th Missile Wing — AFGSC

A complex road network provides access to the 90th Missile Wing's Intercontinental Ballistic Missile Fields. The Wing's Transportation Control Center (TCC) monitors and communicates travel conditions for the roads network to ensure constant access to this strategic AF weapons platform.

Yesterday, the TCC tracked and displayed road conditions using a hand-drawn, wall-mounted, paper map. Base personnel traveling to the missile field were required to contact the TCC by phone or visit the office in person to obtain travel conditions.

Today, the Road Condition Viewer provides online viewing and editing of near-real-time mission-critical road condition maps via a simple web interface. All Common Access Card (CAC)-authenticated users on base and in the missile field can use this tool. This GeoBase-enabled capability ensures safe travel and strategic access to and from 155 Launch Facilities and Missile Alert Facilities.

Tomorrow, GeoBase will employ an enterprise approach to develop and share geospatial information and toolsets like the 90th Missile Wing's Road Condition Viewer, to enhance CE's support across the AF mission spectrum. Through smart engagement in CE governance, GeoBase will develop, share, and leverage best practices AF-wide, for maximum benefit.

VISION

"A widely accepted and accessible program providing structured geospatial capabilities for a full range of mission applications"

GeoBase is continually engaged with a vision of becoming a program that is more widely used and more highly valued. The GeoBase vision describes a program that is thoroughly integrated across CE and universally relied upon for its broad expeditionary and garrison support of the warfighter. To achieve and support this level of integration and reliance, GeoBase must provide a common, user-driven baseline of geospatial data and capabilities supported by standard, yet flexible processes that are proactively governed, managed, and maintained. GeoBase must also present a consistent look, feel, and means of access.

A Dynamic Vision for Tomorrow
GeoBase – AF IGI&S

Today, the primary customers and users of GeoBase services are CE-centric.

Tomorrow, the program will have a broader base of users and support that spans the entire AF enterprise in order to facilitate both AF and CE mission accomplishment.

Today, GeoBase products, services, capabilities, access, processes, and infrastructure vary widely among MAJCOMs, FOAs, and DRUs. This necessitates re-training as personnel (customers and GeoBase staff alike) move from location to location. It causes frustration as customers discover services and products in one location are different or not available in others.

Tomorrow, shared GeoBase processes will be centrally captured and implemented across the entire GeoBase program. A GeoBase governance body will sustain the mechanisms necessary for the adaptation and evolution of these standard processes. Those unique, mission-critical processes specific to a particular operation or organization will retain the flexibility and independence necessary to maintain agile warfighter support.

Today, GeoBase supports a number of temporary bridging solutions including the Activity Management Plan (AMP) A-file, the space optimization S-file, and the Air Force Space Command (AFSPC) Installation Control Center Common Operational Picture (IC3OP).

Tomorrow, a uniform GeoBase program will support long-term enterprise AF solutions including Next Generation (NexGen) Information Technology (IT) — a CE system providing new capabilities and resources to collect, manage, and access the critical data needed to better administer AF assets. Greater standardization will expand accessibility of GeoBase services and products, reduce maintenance costs, and decrease operational training requirements.

Today, delivery of most GeoBase products and services is by request. This request process requires participation of geospatial information systems experts.

Tomorrow, offering more self-service products and solutions will not only allow GeoBase to serve more customers with traditional, basic map products, but will also allow geospatial subject matter experts to focus efforts towards deriving new solutions for emergent, unique, and specific requirements.

GOALS

The Civil Engineer identified three Goals as the foundation of the CE Strategy: Build Ready Engineers, Build Great Leaders, and Build Sustainable Installations. The GeoBase Goals and Objectives will support the CE Strategic Plan and advance the GeoBase Program towards improved warfighter support. Appendix C illustrates the linkages between the CE Strategic Plan and the GeoBase Strategy.

Achieving the GeoBase program's goals will require a committed, collaborative, and sustained effort over a 3-5 year period. The Goals are intertwined and re-enforcing. Attaining the GeoBase goals and, consequently, the GeoBase vision will facilitate CE's mission to "provide, operate, maintain, and protect sustainable installations as weapon-systems platforms…" Attainment will further enhance CE and AF mission accomplishment through increased accessibility and usage of geospatial capabilities that enhance management and decision-making (see Appendix B for detailed Goals, Objectives, and Initiatives).

GOAL 1 PROVIDE A STANDARD YET AGILE PROGRAM:

Provide a standard yet agile Air Force program to support the warfighters' unique, emerging needs in both the expeditionary and garrison environments

Overview

The processes that drive GeoBase governance, guidance, and operation rely on dedicated and formalized decision-making structures. As processes and business methods across the CE enterprise become standardized, GeoBase users will find consistent procedures and infrastructure available, regardless of their duty location. While consistency and repeatability characterize a mature program, successful execution of the GeoBase strategy also calls for continuous adaptation and improvement. The GeoBase program needs to retain the freedom and flexibility to respond to the shifting requirements of its strategic partners as operating environments evolve and new missions emerge. By standardizing program processes and governance wherever possible, GeoBase will advance toward a vision of increased acceptability and improved support for the full spectrum of CE, AF, and DoD missions.

Roof Data Visualization
Tinker AFB — AFMC

Thousands of rooftops exist at Tinker Air Force Base (AFB), requiring continual upkeep and maintenance. CE Operations Customer Service tracks the condition of these rooftops and plans inspections and repairs.

Yesterday, Operations maintained rooftop condition data in a tabular database without implementing data validation procedures.

Today, the Roof Data Visualization tool provides web-enabled viewing and editing of roof inspection and roof section information, improving the overall quality and accessibility of rooftop data. By enabling the visualization of the roof Installation Condition Index (ICI) in real-time, the tool enables timely identification of roof sections requiring maintenance and streamlines the repair and inspection process.

Tomorrow, working within CE governance and in close coordination with CE's functional communities, GeoBase will identify, validate, and fulfill enterprise requirements for standardized solutions like Tinker's Roof Data Visualization tool. Such close cross-functional collaboration at the enterprise level will maximize GeoBase support to CE.

GOALS

Goal-Level Progress Indicators

The GeoBase program will employ appropriate goal-level indicators to assess efforts associated with achieving a standard yet agile program, including:

- Rate of responsiveness to warfighter needs through timely delivery on customer requests
- Implementation of standardized business processes
- Level and distribution of participation in program governance

Achieving Our Goal

Designing GeoBase around a comprehensive and inclusive governance structure will allow development to occur in an open, innovative, and collaborative fashion. GeoBase will leverage the prerogative of an independent panel (GeoBase Panel) as defined by the CE Governance Structure for the inclusive design and administration of a standard yet agile GeoBase program.

Continual process improvement will support GeoBase program structure and flexibility. GeoBase process improvement will:

- Incorporate industry standards and best practices into optimized, standardized playbooks and business rules
- Leverage CE-defined procedures for process mapping, standardization, and improvement
- Provide a direct link between business processes and geospatial IT capabilities
- Facilitate identification of data and capability requirements

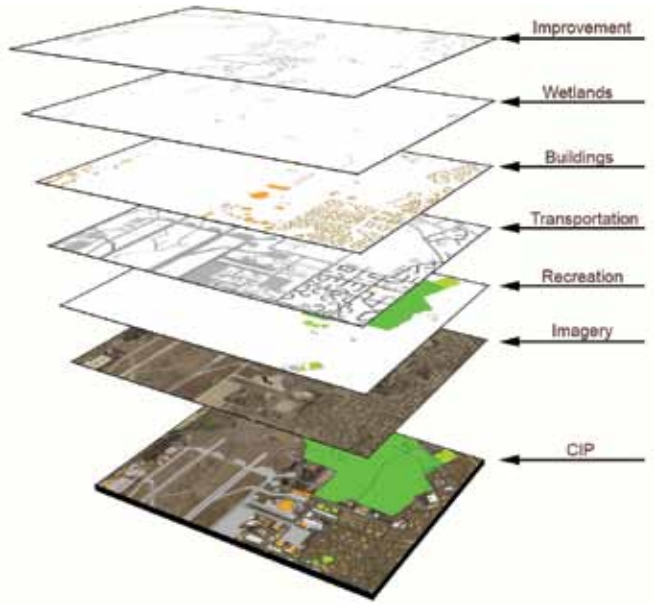
GeoBase will establish a requirements definition process to align program development with the needs of the warfighter. The GeoBase requirements definition process will:

- Identify existing geospatial data, services, and technology
- Determine roles and responsibilities to meet requirements
- Analyze requirements and align them to resources and lines of business
- Identify resource gaps
- Provide leadership with the context needed to prioritize requirements and govern investments and initiatives
- Identify commonalities within the requirements of different communities to avoid duplication of effort
- Allow for querying the requirements database to develop and support metrics

GOAL 2 ENSURE DATA QUALITY: Create, enforce, and maintain geospatial data standards through quality assurance

Overview

Data is the foundation of all vital mission decisions. Numerous programs across CE, AF, and DoD rely on GeoBase for high-quality geospatial data. Standard geospatial data creation and maintenance processes are essential to ensure common, consistent, and achievable quality standards for garrison and expeditionary GeoBase. Geospatial standardization will facilitate efficient data management, improve data sharing, and enable greater acceptance, understanding, and utilization by geospatial data consumers. High quality, current, and standardized geospatial data are important elements of GeoBase. These elements enable integration across a wide community and improve alignment with the Data Standardization Process of the CE NexGen IT Program Management Plan. By establishing and maintaining robust geospatial data standards, GeoBase will improve the structure, quality, and utility of AF Installation Geospatial Information and Services (IGI&S) while aligning with DoD requirements.



Goal-Level Progress Indicators

GeoBase will use the following indicators to track progress towards this goal:

- Percentage of CE installation geospatial data with developed Guidance for Quality Assurance
- Implementation of procedures for quality analysis and quality control
- Compliance rate of CE installation geospatial data with accepted standards
- Conversion percentage of all CE installation geospatial data layers to the current DoD Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE)
- Conversion percentage of all CE installation geospatial metadata (associated standards and data descriptions) to the current DoD Defense Installation Spatial Data Infrastructure (DISDI) Geospatial Metadata Profile (DGMP)

Achieving Our Goal

The following actions will standardize installation geospatial data across the AF and ensure compliance with DoD specifications:

- Maintain GeoBase data in compliance with active SDSFIE (currently SDSFIE 3.0)
- Maintain GeoBase metadata according to the active DGMP

As a functional data steward for AF installation geospatial data, GeoBase will collaborate with AF installation business data owners to develop the guidance necessary to maintain and enforce established standards. The GeoBase program will:

- Create and adopt Guidance for Quality Assurance that ensures existing and future installation geospatial data conform to the standards and criteria necessary for a full spectrum of mission support
- Develop and maintain procedures for data steward ownership and data currency
- Develop mechanisms to track and report data compliance with accepted standards

GOAL 3 DEVELOP AN ENTERPRISE ARCHITECTURE:

Develop a geospatial enterprise architecture that achieves increased utility and savings

Overview

Enterprise architecture (EA) standardizes and optimizes interactions of an organization's information, technology, and people. This achieves efficiencies that lead to improved performance and cost savings. GeoBase will employ a holistic, technical review of geospatial processes and IT infrastructure to define its standard geospatial EA.

Establishing a geospatial EA consists of developing a streamlined, standardized, and accessible framework for geospatial data, software, hardware, and related services. GeoBase will solicit input from across the AF community to define an inclusive EA that supports a spectrum of mission requirements and conforms to CE, AF, and DoD specifications. By consolidating the structure of its data and capabilities across

GOALS

Confined Spaces Tool
GeoBase — AFSOC

Confined spaces such as storage tanks, shafts, and vaults generally have limited means of exit or entry and frequently present additional hazards such as poor ventilation, toxic contamination, or extreme temperature. AFSOC Wing Safety (SOW/SE) is required to track and communicate potential dangers for over 1,200 suspected confined spaces.

Yesterday, safety officers would employ inefficient, ad-hoc solutions that relied on custom tabular databases. Officers could not accurately track the locations of dangerous confined spaces, leading to confusion and increasing the potential for injury when multiple spaces were present in a small area.

Today, the AFSOC Geo-Integration Office (GIO) has created a Command-centralized tool to access, control, manage, display, and evaluate AFSOC Wing Safety's process for confined spaces. The tool provides detailed reports about confined spaces including atmospheric condition information, maps of the confined spaces' precise locations, and links to related photographs and documentation.

Tomorrow, GeoBase will establish processes and architecture necessary to develop and deliver geoenabled, requirements-driven tools like AFSOC's Confined Spaces Tool, at the enterprise level. GeoBase will partner with relevant CE functional communities to analyze potential capabilities and to incorporate those most promising into the GeoBase enterprise architecture.

the program, GeoBase will provide standardized products and services to all users regardless of location. This EA will facilitate data and workflow standardization, minimize training requirements for custom and otherwise non-standard geospatial systems, and decrease GeoBase's physical footprint through reductions in excess, obsolete, and underutilized infrastructure. Efficiencies achieved by this architecture will increase the utility of GeoBase and ultimately generate savings for reinvestment into the AF enterprise.

Goal-Level Progress Indicators

To track implementation of the EA, GeoBase will continually assess the following:

- Agreement across the GeoBase community on a standard EA
- Consistency of funding mechanisms for implementation and sustainment of the architecture
- Timeliness of the transition process and efficiency against performance metrics
- Percentage of MAJCOM users or bases implementing the new EA
- Migration of GeoBase data and capabilities to the standard architecture
- Cost savings resulting from hardware and software standardization and process optimization

Achieving Our Goal

At a high level, constructing the EA involves two primary steps: design and implementation. To develop the design, GeoBase will use a holistic and technical review of geospatial processes and IT infrastructure. The geospatial enterprise architecture design will:

- Provide official and consistent procedures to discover, view, obtain, edit, and maintain authoritative geospatial data

- Increase ease of discovery for maps, data, and information
- Consolidate access to a comprehensive portfolio of geospatial data and capabilities
- Enable one primary web-based data visualization and viewing capability
- Diminish redundant development efforts and generate savings resulting from reduced infrastructure

To implement the EA, GeoBase will create and execute a thorough EA implementation and sustainment plan. The plan will:

- Streamline processes for creating, collecting, maintaining, managing, exposing, analyzing, and visualizing geospatial information
- Launch a consensually established baseline capability that supports the warfighter without disrupting existing mission-critical services
- Establish mechanisms to sustain the architecture as program needs evolve
- Maintain the necessary flexibility and agility for appropriate adaptation

GOAL 4 OBTAIN ADEQUATE RESOURCES: Obtain adequate resources to sustain and improve geospatial capabilities

Overview

To meet the evolving needs of the warfighter and to remain current with rapid changes in technology, GeoBase must continue to invest in both physical and human capital. The program's optimal level of investment must secure sufficient funding and qualified personnel, while forging an efficient and fiscally responsible program rooted in the CE principles of asset management. GeoBase will place adequate focus and attention on the processes of identifying and acquiring resources to ensure the program has the means to meet current responsibilities and posture for future requirements in both the garrison and expeditionary environments.

Airfield Obstruction System
GeoBase/CE Planning — PACAF

Height restrictions for infrastructure built near airfields enable the development of precision landing approaches for aircraft. With constant construction of structures such as cell phone towers and wind turbines, airfield planners need to track an ever-increasing number of potential airfield obstructions to sustain operations.

Yesterday, planners would track airfield obstructions manually with hard copy data. Evaluation of a potential obstruction required the use of aerial navigation charts, Tab maps, and paper forms and could take 15 minutes per obstruction. Planners addressed waivers and violations with separate processes and forms.

Today, a GeoBase-enabled system maps the location of obstructions and provides instant access to photos and standardized forms. A planner can process a single obstruction in less than five minutes with a central, web-based application for access, control, management, display, and evaluation of potential airfield obstructions. The Airfield Obstruction System is in place at nine PACAF Main Operating Bases and similar tools are present at ACC, AFSOC, AETC, and AMC.

Tomorrow, opportunities to streamline processes and conserve resources will be identified across the enterprise, and "best of breed" geospatial solutions will be adopted and adapted AF wide. Working with appropriate functional communities and within CE governance, GeoBase will help identify and promulgate the best of proven solutions like these airfield obstruction management tools. As a result, all commands will be able to leverage a single AF solution that meets their needs. This approach will enhance both efficiency and effectiveness.

GOALS

Goal-Level Progress Indicators

To measure progress towards the goal, the GeoBase program will track indicators that include:

- Program Objective Memorandum (POM) funds requested by the GeoBase program
- Comparison of POM funds programmed for GeoBase against funds requested
- Comparison of the GeoBase program's obligation rate with its level of funding in the year of execution
- The gap between actual and desired staff qualifications at all program levels
- Appropriateness of staffing standards at all levels
- Staff turnover rate
- GeoBase recruitment rate

Achieving Our Goal

GeoBase will manage a program funding strategy to ensure that the process of resource allocation serves the greatest mission needs. In support of the AF precept "do more with less," GeoBase will:

- Ensure visibility of complete and accurate funding requirements for those placing funding requests
- Coordinate funding issues across the program and ensure decision-makers are fully informed
- Balance expansion of services and capabilities with the realization of cost savings and cost avoidance
- Develop incentives to liberate resources for reinvestment into mission-critical requirements

People constitute the program's primary asset. As such, the GeoBase Strategy will support, preserve, and grow the program's human capital through the following actions:

- Research, analyze, and define staffing requirements
- Define new workforce standards, qualifications, and core competencies

- Develop training and education to support required GeoBase skills and specialty training standards
- Create robust position descriptions and career development paths
- Identify and cultivate opportunities for professional development and continuing education
- Attract the most qualified and dynamic candidates to the GeoBase staff

GOAL 5 PROMOTE AWARENESS AND COLLABORATION:

Ensure our customers and stakeholders are aware of our value and leverage our capabilities to achieve seamless mission integration

Overview

Achieving greater awareness and mission integration will enable GeoBase to effectively support a greater portion of the AF community. Formalized policies and procedures that foster information exchange and facilitate collaboration will improve the processes through which GeoBase exposes capabilities and supports customers' mission requirements. Thorough documentation and communication of the full inventory of GeoBase capabilities, products, and services will minimize confusion and duplication while amplifying support for collaborative initiatives like NexGen IT.

Goal-Level Progress Indicators

To implement this goal, GeoBase will leverage the following goal-level indicators to track the gains in awareness and collaboration:

- Utilization levels of the existing GeoBase portfolio of tools and data
- Requests for custom mapping products by current and potential customers
- Volume of web traffic to online program resources
- References to GeoBase appearing in CE and non-CE publications

Achieving Our Goal

GeoBase will formalize structures and processes for strategic communication to achieve greater awareness and collaboration. GeoBase will educate current and potential customers regarding the specific value and benefit the program can offer in support of CE, AF, and DoD missions. The GeoBase Program will:

- Develop resources for strategic communications
- Centrally develop and deploy standard outreach initiatives
- Push mission-critical information to GeoBase stakeholders

- Promote effective documentation and communication of GeoBase solutions
- Build awareness of the full inventory of program capabilities, products, and services

GeoBase will formalize and facilitate greater interaction with customers and stakeholders to increase knowledge transfer. GeoBase will implement the following actions:

- Review AF policy for accurate and complete references to the GeoBase program
- Codify GeoBase capabilities and establish GeoBase as an authoritative provider of installation geospatial support services
- Formalize partnerships within and outside of CE
- Leverage partnerships through the promotion and creation of mechanisms for information exchange

EXECUTION

OVERVIEW

The GeoBase Strategy provides context and guidance for program actions, development, and implementation over the next 3-5 years. The Information Technology Branch Chief (AF/A7CRT) is the official steward of the GeoBase Strategy. The CE Governance Structure provides the framework for GeoBase to implement this Strategy through the efforts of a chartered GeoBase Panel under the Resources Program Group. The Strategy will continue to evolve under the auspices of AF/A7CRT and the GeoBase Panel, to meet the emergent needs of the warfighter and the changing mission requirements of CE, AF, and DoD. The GeoBase Strategy and associated documentation will be validated a minimum of once every two years.

LEADERSHIP AND GOVERNANCE STRUCTURE

AF/A7CRT provides oversight, monitors progress of implementation, and updates the GeoBase strategy. The GeoBase Panel, commissioned within the CE Governance Structure and chartered under authority of the Resources Program Group, functions as the collaborative body governing program operations. The GeoBase Panel submits recommendations to AF/A7CRT to define, implement, and achieve GeoBase Strategy Goals and Objectives. The GeoBase Panel maintains a forum to communicate issues and develop recommendations related to the Strategy, including any proposed additions, revisions, or deletions. GeoBase Panel recommendations are subject to approval of AF/A7CRT. The GeoBase Panel Charter defines GeoBase Panel membership and business rules.

ROLES AND RESPONSIBILITIES

The GeoBase Panel assigns roles and responsibilities for developing recommendations. It also monitors key indicators to track program development and implementation, and to maintain accountability with respect to execution of the GeoBase strategy. The Panel charters Working Groups and tasks them to develop recommendations for tactical implementation of the strategy. A Working Group is specifically empowered and tasked as a champion for each of the five Goals, as designated in the GeoBase Panel Charter. As Goal Champions, the Working Groups develop Action Plans associated with the objectives aligned to their respective Goals. AF/A7CRT provides lead facilitators for each commissioned Working Group. Lead facilitators manage communications, provide assistance in designating roles and responsibilities, and provide subject matter expertise for their assigned areas of responsibility (AOR).

IMPLEMENTATION

Panel members develop mechanisms and schedules for meetings, according to the GeoBase Panel Charter. Optimal Panel and Working Group meeting frequency is once per month.

Action Plans

Each Working Group is accountable to develop Action Plans that detail the discrete steps necessary to successfully implement their responsibilities. Each Action Plan will outline objective-associated initiatives that define "who does what by when." Each Action Plan will:

- Identify desired outcomes
- Define actionable steps to completion
- Identify resource requirements
- Assign responsibility for execution
- Establish timelines and performance metrics
- Track and ensure progress against performance metrics.

Risks and Mitigation

This strategy will drive significant change. While it is difficult to foresee all associated risks, it is possible to make educated predictions and give due consideration to viable alternatives. Accordingly, risk identification and mitigation will help GeoBase manage expectations, recognize constraints, and ultimately, achieve its mission and vision.

The GeoBase Panel and Working Groups will identify potential obstacles to implementing the GeoBase Strategy. The Working Groups will conduct risk assessments on the documented obstacles to identify and quantify potential negative impacts and frequency. For each risk deemed both as probable and as having a significant material impact, mitigation strategies will be developed and included in the relevant Action Plans.

Action Plan Implementation

Working Groups will submit developed Action Plans to the GeoBase Panel and AF/A7CRT for approval. As AF/A7CRT approves each Action Plan, the AF commands and AF/A7CRT (via the GeoBase Panel) will empower the respective Working Group to implement its Action Plan. At each GeoBase monthly meeting, the Working Group will report on progress against the Action Plan and any corrective measures needed to maintain the initial schedule.

APPENDICES

APPENDIX A: Background

GeoBase, commissioned July 2001, supports the Air Force (AF) Civil Engineering (CE) mission. It does this by providing accurate and current satellite imagery and map data representing real-world features and conditions for AF installations, ranges, and property. GeoBase supports a wealth of activity ranging from bedding down an F-22 Raptor fighter aircraft to navigating an unfamiliar base during Temporary Duty (TDY). These services and a host of others constitute the portfolio of assets GeoBase employs in support of mission needs. GeoBase strives to provide ready access to its core capabilities through the four GeoBase services. Strategic GeoBase, Garrison GeoBase, Expeditionary GeoBase, and GeoReach (further discussed in the Core Capabilities section). Committed personnel and sophisticated information technology (IT) infrastructure enable these services.

CORE SERVICE PROVIDERS

Dispersed across the AF enterprise, GeoBase staff builds a service that serves Airmen when and where they need it. Numerous AF Civil Engineers deploy GeoBase in garrison and expeditionary environments, while a body of contract staff serves in close support. The majority of AF installations and many FOAs have a resident GeoBase capability and supporting staff. A coordinating office, known as a Geo-Integration Office (GIO) exists at each MAJCOM and DRU headquarters location. A skilled team at each GIO ensures accomplishment of the policies, guidance, and framework established by the GeoBase Program leadership. A permanent GIO is present at each of the following headquarters locations:

- Headquarters Air Force (HAF)
- Major Command (MAJCOM)
  - Air Combat Command (ACC)
  - Air Education and Training Command (AETC)
  - Air Force Global Strike Command (AFGSC)
  - Air Force Materiel Command (AFMC)
  - Air Force Reserve Command (AFRC)

  - Air Force Special Operations Command (AFSOC)
  - Air Mobility Command (AMC)
  - Air Force Space Command (AFSPC)
  - Air National Guard (ANG)
  - Pacific Air Forces (PACAF)
  - United States Air Forces in Europe (USAFE)
- Direct Reporting Units (DRU)
  - United States Air Force Academy (USAFA)
  - Air Force District of Washington (AFDW)

CORE CAPABILITIES

GeoBase develops its core services through collection, creation, maintenance, management, exposure, analysis, and visualization of current, accurate, and authoritative installation geospatial data. Its primary data products include the Common Installation Picture (CIP), the Regional Installation Picture (RIP), and numerous mission-specific, mapped datasets (Mission Data Sets, MDS). GeoBase provides associated standards and data descriptions (metadata) and maintains architecture and capabilities that allow Airmen to use the data directly. GeoBase provides geospatial analyses and self-service analysis capabilities as well. It is also able to connect CE business data to corresponding geospatial attributes as an essential element of the NexGen IT data structure: this capability permits the geospatial organization, visualization, and analysis of CE business data for real-world situations.

The processes associated with the GeoBase Program's core data and capabilities fall into four primary services. Strategic GeoBase provides visualization from a broader, regional level that emphasizes interactions between the AF installation, the surrounding community, and other Department of Defense (DoD) installations. Garrison GeoBase integrates many overlapping mapping efforts across installations, providing a structure for Base Operational Support and a training environment for warfighters who will execute Expeditionary GeoBase operations at Forward Operating Locations (FOL). Expeditionary GeoBase provides a streamlined, forward-deployed version of Garrison GeoBase capabilities. GeoReach is an extension of Expeditionary GeoBase that provides an expeditionary site mapping and base location capability.

Through its data, capabilities, and primary services GeoBase has committed itself to efficient and effective support for CE, AF, and DoD decision makers. The Program's reach extends across the greater GeoBase community to provide the installation geospatial situational awareness necessary to serve national interests. Emerging and evolving mission requirements will drive further advancements in GeoBase processes and capabilities, for a program rooted in standard yet agile warfighter support.

APPENDIX B: Tables of GeoBase Goals, Objectives and Proposed Initiatives

GOAL 1 PROVIDE A STANDARD YET AGILE PROGRAM: Provide a standard yet agile Air Force program to support the warfighters' unique, emerging needs in both the expeditionary and garrison environments

Objectives		Initiatives	
1.1	Define, establish, implement and sustain a comprehensive governance structure	1.1.1	Develop a Panel scope and charter
		1.1.2	Define and establish working groups
		1.1.3	Define a prioritization process for requirements, with Offices of Primary Responsibility (OPRs, could be a group of people, an organization, or an individual)
		1.1.4	Review, update, and create policy and guidance (processes become policy)
		1.1.5	Formalize effective horizontal and vertical communication
1.2	Develop a requirements definition process	1.2.1	Identify existing products / tools / capabilities
		1.2.2	Identify best methodology to capture, catalog, and analyze requirements
		1.2.3	Identify best tools to capture, catalog, and analyze requirements
		1.2.4	Define the roles and responsibilities internal to CE
		1.2.5	Define the roles and responsibilities external to CE
1.3	Formalize, document, and implement standard business processes	1.3.1	Identify and baseline current processes (initial cycle)
		1.3.2	Determine best practices (initial cycle)
		1.3.3	Document and reengineer processes, as necessary (initial cycle)
		1.3.4	Test and evaluate, if necessary
		1.3.5	Implement processes within a specified timeframe
		1.3.6	Measure process improvement (feedback on performance and outcomes)

GOAL 2 ENSURE DATA QUALITY: Create, enforce, and maintain geospatial data standards through quality assurance

Objectives		Initiatives	
2.1	Lead the creation of Guidance for Quality Assurance for select Data Layers	2.1.1	Create Guidance for Quality Assurance template
		2.1.2	Canvas Data Layers and prioritize (initial cycle)
		2.1.3	Identify SMEs and governance structure (initial cycle)
		2.1.4	Initiate direct communication and collaboration between HAF and SMEs
		2.1.5	Create Guidance for Quality Assurance
2.2	Establish guidance for geospatial data standard implementation	2.2.1	Create Concept of Operations (CONOPS) and data management guidance to include implementation of SDSIFE version 3.0
2.3	Ensure data layer stewards implement data standards in accordance with the Guidance for Quality Assurance	2.3.1	Add verbiage to appropriate Air Force Instruction (AFI) to include AFI 32-10112

GOAL 2 ENSURE DATA QUALITY: Create, enforce, and maintain geospatial data standards through quality assurance, continued			
Objectives		**Initiatives**	
2.4	Track and enforce compliance with data policies, standards and regulations	**2.4.1**	Develop a compliance plan for the GeoBase community and incorporate the plan into appropriate inspection checklists
		2.4.2	Establish and implement processes for Quality Analysis and Quality Control (QA / QC, initial cycle)
		2.4.3	Establish reporting metrics for leadership oversight (initial cycle)
GOAL 3 DEVELOP AN ENTERPRISE ARCHITECTURE: Develop a geospatial enterprise architecture that achieves increased utility and savings			
Objectives		**Initiatives**	
3.1	Define a geospatial enterprise-wide architecture	**3.1.1**	Research the DoD Information Assurance Certification and Accreditation Process(DIACAP) framework
		3.1.2	Define stakeholder requirements
		3.1.3	Collect hardware / software (system), information/ system exchange data, and operational data
		3.1.4	Build architecture products
		3.1.5	Present architecture definition to Process Panel for approval
3.2	Create an implementation plan for an enterprise system	**3.2.1**	Draft plan
		3.2.2	Coordinate plan
		3.2.3	Communicate plan
		3.2.4	Staff the DIACAP process
3.3	Implement a system architecture	**3.3.1**	Build and test the enterprise
		3.3.2	Release the system
3.4	Sustain architecture	**3.4.1**	Sustain DIACAP (initial cycle)
		3.4.2	Maintain architecture (initial monthly cycle)
GOAL 4 OBTAIN ADEQUATE RESOURCES: Obtain adequate resources to sustain and improve geospatial capabilities			
Objectives		**Initiatives**	
4.1	Define a GeoBase program funding strategy that optimizes centralized, decentralized, and hybrid approaches	**4.1.1**	By command, determine current funding streams and strategies
		4.1.2	Determine future changes and constraints
		4.1.3	Communicate current funding situation and anticipated changes
		4.1.4	Collect and identify command-specific recommendations and ideas
		4.1.5	Analyze collected information and develop an array of funding options
		4.1.6	Collect feedback and develop /submit final recommendation for approval

GOAL 4 OBTAIN ADEQUATE RESOURCES: Obtain adequate resources to sustain and improve geospatial capabilities, continued

Objectives		Initiatives	
4.2	Define strategies that communicate the value and benefits of our geospatial capabilities to advocate for their support	4.2.1	Identify PEM (Program Element Managers) and program funding advocates / POCs at all levels
		4.2.2	Develop a standard communication package / template for the financial audience that articulates why GeoBase exists
		4.2.3	Distribute template to the Commands and the Communication Working Group to review, populate, and collect feedback
		4.2.4	Analyze collected information / feedback to create standard communications package / fact sheet
		4.2.5	Publish and distribute the standard communications package
4.3	Define strategies to identify and realize cost savings, cost avoidance, and efficiencies	4.3.1	Conduct a scan of recent and in-progress cost saving ideas and programs
		4.3.2	Compile, publish, and distribute results of the scan
		4.3.3	Develop and implement a process to track and identify internal initiatives with potential for broad application and cost savings
		4.3.4	Identify and implement most effective methods for delivering information that supports financial issues
4.4	Develop a standard staffing plan addressing manning levels and civilian career paths	4.4.1	Capture the current staffing situation and staffing needs, including civilian / contractor breakdown and conversion status
		4.4.2	Research approaches to the creation of civilian career paths through external partnerships with USMC, A2, etc.
		4.4.3	Develop civilian career paths in using a “blued”, i.e., an AF-adapted version of resources obtained from external partners including A2 and USMC
		4.4.4	Define program needs for implementation through collaboration with A1 and OPM in development of common staffing standards and a standard procedure for determining staffing levels
4.5	Delineate staffing requirements and qualifications and identify training needs for program staff	4.5.1	Define required skills and specialty training standards (STS) for established program staff roles
		4.5.2	Perform gap analysis to compare training / knowledge needs versus training / knowledge resources for enlisted, officers, and civilians (initial cycle)
		4.5.3	Develop a repository of training resources and training development plans in collaboration with partners (initial cycle)
		4.5.4	Develop a continual process for assessing the adequacy of training / knowledge resources and demonstrated staff proficiencies
		4.5.5	Revise and / or create training development plans and resources as needed to address gaps in available resources (initial cycle)
4.6	Obtain and retain qualified staff	4.6.1	Develop accurate, adequate, and best possible Position Descriptions (PDs) and implement them across the AF
		4.6.2	Develop and implement a process to collect and publish positive features of GeoBase careers

GOAL 5 PROMOTE AWARENESS AND COLLABORATION: Ensure our customers and stakeholders are aware of our value and leverage our capabilities to achieve seamless mission integration

Objectives		Initiatives	
5.1	Establish a GeoBase strategic communication function	5.1.1	Approve and resource a communications specialist
		5.1.2	Dedicate resources for maintenance and development of a Community of Practice (CoP)
5.2	Develop and deploy a strategic communication plan with methods, mediums, targeted audiences, and focused messages	5.2.1	Conduct Stakeholder analysis
		5.2.2	Draft a plan
		5.2.3	Coordinate the plan
		5.2.4	Deploy and implement the plan
		5.2.5	Assess and adjust the plan (initial cycle)
5.3	Conduct a review of policy and recommend updates as appropriate	5.3.1	Review AF publications
		5.3.2	Identify targeted AF audiences for a data call
		5.3.3	Develop and conduct the data call
		5.3.4	Establish a Tiger Team to review data call results
		5.3.5	Develop and propose policy changes to the GeoBase Panel
		5.3.6	Engage with the A-staffs to ensure updates are formalized
5.4	Revise appropriate AFIs including AFI 32-10112 to establish GeoBase as the authoritative source and program of record for AF Installation Geospatial Information and Services (IGI&S)	5.4.1	Draft recommended language
		5.4.2	Coordinate revised AFI language
		5.4.3	Staff proposed changes
5.5	Establish forums to exchange ideas through internal and targeted external working groups	5.5.1	Establish GeoBase SharePoint–type central online collaboration tools
		5.5.2	Advertise the tools (establish mechanisms and begin advertising)
		5.5.3	Maintain the tools and build out (enhance) the tools (initial cycle)
		5.5.4	Identify and incorporate existing working groups (internal and external to CE, initial cycle)
		5.5.5	Reduce redundancies and fill gaps in the existing working groups' structures and scopes (initial cycle)
5.6	Conduct program-wide training and education	5.6.1	Identify existing training resources
		5.6.2	Determine and leverage the best training materials
		5.6.3	Assess needs for awareness training
		5.6.4	Develop new, standard training
		5.6.5	Lay out a targeted plan for rolling out training
		5.6.6	Deploy training
		5.6.7	Evaluate and improve training (initial cycle)
5.7	Build business level partnerships and institutionalize support agreements for partnerships external to CE	5.7.1	Identify partners
		5.7.2	Draft Memorandums of Agreement (MOA)/ Service Level Agreements (SLA) language
		5.7.3	Coordinate agreements with partners
		5.7.4	Finalize and implement agreements

APPENDICES

APPENDIX C: Alignment of GeoBase and CE Goals and Objectives

U.S. AIR FORCE CIVIL ENGINEERING 2009-2013 STRATEGIC PLAN			
Objectives		**Initiatives**	
1	Provide more effective Civil Engineer expeditionary and emergency response and management capabilities to meet current and emerging Air Force and Combat Commander requirements	1.1	Optimize Combined, Joint, and Total Force partnerships to enhance Civil Engineer expeditionary capabilities
		1.2	Transform Air Force emergency response operations programs
		1.3	Modernize Civil Engineering contingency and warfighting equipment
2	Organize, develop, enable, and retain a trained and capable Total Force Civil Engineer team ready to meet current and emergent mission requirements	2.1	Optimize Civil Engineer business process organization and manpower through completion and validations of Civil Engineering Transformation
		2.2	Improve delivery of recurring and just-in-time training and education to meet current and emerging requirements
		2.3	Improve the corporate recruitment and retention of Civil Engineering personnel, knowledge, and skills across the Total Force
		2.4	Implement Next Generation (NexGen) IT
		2.5	Integrate resource management processes across the Civil Engineer enterprise
		2.6	Provide timely and consistent communications across the Civil Engineer enterprise and key stakeholders
3	Develop sustainable installations by implementing asset management principles for built and natural assets	3.1	Institutionalize an asset management approach in our day-to-day business practices
		3.2	By 2020, reduce by 20 percent the amount of the Air Force physical plant that requires funds
		3.3	Optimize natural infrastructure assets
		3.4	Improve current and future infrastructure energy efficiency and water conservations through improved processes and sustainable energy efficiency standards
		3.5	Promote the development of renewable and alternative energy for use in facilities
		3.6	Significantly reduce or stabilize utility costs
		3.7	Transform work and supply management to achieve cost reductions and organizational efficiencies
		3.8	Enhance and standardize the enterprise planning process
		3.9	Enhance portfolio management for sustainable installations

Strategic Alignment	**CE Goal 1** Build Ready Engineers			**CE Goal 2** Build Great Leaders						**CE Goal 3** Build Sustainable Installations								
	Objective 1.1	Objective 1.2	Objective 1.3	Objective 2.1	Objective 2.2	Objective 2.3	Objective 2.4	Objective 2.5	Objective 2.6	Objective 3.1	Objective 3.2	Objective 3.3	Objective 3.4	Objective 3.5	Objective 3.6	Objective 3.7	Objective 3.8	Objective 3.9
GEOBASE GOAL 1 PROVIDE A STANDARD YET AGILE PROGRAM: Provide a standard yet agile Air Force program to support the warfighters' unique, emerging needs in both the expeditionary and garrison environments																		
Goal 1				X												X	X	X
OBJ 1.1				X														
OBJ 1.2																X	X	X
OBJ 1.3				X												X	X	
GEOBASE GOAL 2 ENSURE DATA QUALITY: Create, enforce, and maintain geospatial data standards through quality assurance																		
Goal 2		X					X					X					X	
OBJ 2.1							X					X					X	
OBJ 2.2		X					X											
OBJ 2.3							X					X					X	
OBJ 2.4							X					X					X	
GEOBASE GOAL 3 DEVELOP AN ENTERPRISE ARCHITECTURE: Develop a geospatial enterprise architecture that achieves increased utility and savings																		
Goal 3				X			X			X	X					X	X	
OBJ 3.1							X									X		
OBJ 3.2							X										X	
OBJ 3.3				X							X							
OBJ 3.4				X						X								
GEOBASE GOAL 4 OBTAIN ADEQUATE RESOURCES: Obtain adequate resources to sustain and improve geospatial capabilities																		
Goal 4					X	X		X	X	X					X		X	
OBJ 4.1								X		X								
OBJ 4.2								X	X									
OBJ 4.3								X							X		X	
OBJ 4.4								X										
OBJ 4.5					X													
OBJ 4.6						X												
GEOBASE GOAL 5 PROMOTE AWARENESS AND COLLABORATION: Ensure our customers and stakeholders are aware of our value and leverage our capabilities to achieve seamless mission integration																		
Goal 5	X			X	X				X									
OBJ 5.1									X									
OBJ 5.2									X									
OBJ 5.3				X					X									
OBJ 5.4				X														
OBJ 5.5	X								X									
OBJ 5.6					X				X									
OBJ 5.7	X								X									

APPENDICES

APPENDIX D: Glossary

TERM	DEFINITION
Action Plan	A planned series of sequenced and scheduled actions, tasks, or steps and their accountable and responsible parties and needed resources to achieve an objective or goal.
Authoritative Data Source (ADS)	A source of data or information that is recognized by members of a sanctioned governing entity to be valid or trusted because it is considered highly reliable or accurate or is from an official publication or reference.
Common Access Card (CAC)	A Common Access Card (CAC) is a smart card that features bar coding, a magnetic strip, and an embedded integrated circuit chip. It may be used to access buildings and computer systems, and it has the capability to facilitate electronic commerce, allowances, etc. CAC use also gives the Department of Defense the capability to encrypt and privately exchange sensitive information over open networks.
Common Installation Picture (CIP)	The Common Installation Picture (CIP) is a group of 1 raster and 38 vector geospatial data layers that are required to be maintained at every Air Force installation. These layers represent the most used and requested data layers and collectively provide a baseline view of an Air Force base. A Data Model document dictates what each layer should look like, ensuring standardization of CIP Data across the Air Force. Because the CIP layers are required to be collected and standardized, they are available for the widest possible distribution across the Federal Government.
Data Layer	The simplest form of a single layer of geospatial data typically represented as a point, line, or polygon. A Data Layer within a GeoBase Geographic Information System (GIS) is also sometimes referred to as a feature class, image, CADD drawing, etc., and can typically be conceived as corresponding to single legend entry on a traditional, paper-based map.
Defense Installation Spatial Data Infrastructure Group (DISDI)	The Department of Defense (DoD) geospatial oversight program responsible for leveraging spatial information across DoD's Installations and Environment business mission to manage global installations and bases across the United States Armed Forces.
DoD Information Assurance Certification and Accreditation Process (DIACAP)	The DoD process for identifying, implementing, validating, certifying, and managing Information Assurance (IA) capabilities and services, expressed as IA controls, and authorizing the operation of DoD Information Systems (ISs), including testing in a live environment, in accordance with statutory, Federal, and DoD requirements.
DISDI Geospatial Metadata Profile (DGMP)	The DGMP is a profile of the International Organization for Standardization (ISO) standard 19115:2003. It is based on the Department of Defense (DoD) Information Technology Standards Registry (DISR) mandate to implement the ISO standard, and provides the technical details for supporting the definition of a well-structured and unified set of data elements to describe DoD Installations & Environment (I&E) Business Mission Area geospatial data assets. It is standards-based by design and is intended to support the ability of the geospatial community to describe its data holdings (such as the Spatial Data Standards for Facilities, Infrastructure, and Environment also known as the SDSFIE) and to harmonize with other mandated DoD information management strategies to reduce redundant data entries.
Enterprise Architecture (EA)	Enterprise Architecture is used to organize the business, data, application, and technology layers of enterprise. It structures their components, their relationships, and the principles and guidelines governing their design and evolution over time.

TERM	DEFINITION

Expeditionary GeoBase	A lean, forward-deployed version of Garrison GeoBase capabilities, affording commanders and Airmen enhanced situational awareness of the expeditionary base.
Functional Data Set (FDS)	A Functional Data Set (FDS) is a set of all spatial data managed by a functional community such as Environmental, Communications, Security Forces, etc. The functional community is the entity typically responsible for the data stewardship. The development of a FDS is the byproduct of the geospatial requirements definition process.
Functional Data Steward	The organization responsible for adhering to the geospatial management criteria as defined by the Quality Assurance Plans. The functional data steward is identified during the requirements definition process while defining the data needed to respond to a mission requirement. Example: Environmental Functional Data Steward – responsible for Floodplains, Wetlands, Threatened and Endangered Species, etc.
Garrison GeoBase	Garrison GeoBase is a core GeoBase service that ensures a common installation visualization capability is available cross-functionally and enables efficient integration with warfighter and agile combat support (ACS) operations. Garrison GeoBase enhances the many overlapping mapping efforts across installations with a single, coherent approach to geospatial information stewardship, providing the structure for Base Operational Support and the training environment for warfighters executing the Expeditionary GeoBase operations at Forward Operating Locations (FOL).
Geo-Integration Office (GIO)	A single point of contact for GeoBase at any given Air Force (AF) level. The standards and procedures for the GeoBase Program are established at the Headquarters AF Geo Integration Office and implemented via Major Command (MAJCOM) and installation GIOs. The GIO serves as the focal point for geospatial Information and services (GI&S) to support the installation and facilities missions. The GIO is responsible for ensuring that installation and facilities stakeholders have access to timely, relevant, available, and authoritative geospatial information.
GeoBase	GeoBase is the Air Force program for Installation Geospatial Information and Services (IGI&S) and provides guidance on implementing an enterprise geographic information system (GIS) geared towards meeting Air Force Civil Engineering and AF mission requirements for facilities management.
Geoenable	To geospatially enable or geoenable is to apply geospatial capabilities to a business process in order to establish the authoritative spatial and geographic location of business data, and enable contextual spatial analysis. The geoenabling process associates business data with geographic coordinates representing a discrete location in space and on the globe.
Geographic Information System (GIS)	A Geographic Information System (GIS) is an integrated system of data and computer Information Technology (IT) used to manage, visualize, and map information about geographic places, as well as to analyze spatial qualities, characteristics, and relationships.
GeoReach	The GeoReach process is an extension of Expeditionary GeoBase and provides an expeditionary site mapping and base location capability enabling Expeditionary GeoBase. It provides senior planners and Airmen with transformational geospatial knowledge, improved Forward Operating Location (FOL) selection, Time-Phased Force and Deployment Data (TPFDD) planning, and accelerated bed-downs. The GeoReach service supports the Air Force Global Mobility (GM) Concept of Operations (CONOPS) and the Expeditionary Site Survey Process (ESSP).
Geospatial Information and Services (GI&S)	A capability consisting of the collection, information extraction, storage, dissemination, and exploitation of geodetic, geomagnetic, imaged, gravimetric, aeronautical, topographic, hydrographic, littoral, cultural, and toponymic data accurately referenced to a precise location on the Earth's surface. Geospatial services include tools that enable users to access and manipulate data, and include instruction, training, laboratory support, and guidance for the use of geospatial data.

TERM	DEFINITION

APPENDICES

Installation Geospatial Information and Services (IGI&S)	The subset of Geospatial information and Services (GI&S) activities pertaining to the management of Department of Defense (DoD) installations and facilities, to the exclusion of targeting, intelligence, surveillance, and reconnaissance activities.
Metadata	Metadata are data that define and describe other data. Metadata are characteristics or attributes of information assets that describes the type of information asset, its structure, syntax, content, or semantics. It also includes a wide range of other attributes including quality, availability, and origin that assist users in finding, managing, and consuming the information contained in the asset.
Mission Data Set (MDS)	A defined, documented, and approved set of spatial data layers and their accompanying attribute data used to complete a reoccurring task or mission. An MDS is created in order to provide a standardized data model and consistent process for mapping and analysis. The layers within an MDS can be obtained from data layers selected from any number of Functional Data Sets (FDS).
NexGen IT	Next Generation (NexGen) Information Technology (IT) is a solution that will replace nearly 800 Air Force Civil Engineering legacy databases with commercial off the shelf (COTS) capabilities. In the future vision of NexGen IT, CE capabilities will be more centrally used and maintained, existing systems will be consolidated, and data will be maintained to ensure it is visible and accessible to those with a need to know, regardless of where it is stored. The ability to review timely and accurate data will improve across the CE enterprise, and NexGen IT will improve the ability of the CE community to access mission-critical business data.
Playbook	A collection of process maps, narrative and instructional content, relevant reference materials, templates, and forms for a reoccurring program activity. Playbooks provide centrally located processes and standard operating procedures (SOPs), increase accessibility of regulations, policies, or references that relate to the processes, encourage continuous process improvement by providing visibility into the full process cycle, and provide continuity as staff rotate in and out of organizations.
Program Objective Memorandum (POM)	The Program Objective Memorandum (POM) is the primary document used by the Air Force to frame program proposals. The POM includes an analysis of missions, objectives, alternative methods to accomplish objectives, and allocation of resources. The POM is a six-year budget plan that is released biennially, every even numbered year. The POM identifies total program requirements for the next six years and includes descriptions of planned changes to the Future Years Defense Program (FYDP), an Office of the Secretary of Defense (OSD) database containing future projections of resources (funding, manpower, and forces) over five or six years.
Guidance for Quality Assurance	GeoBase Guidance for Quality Assurance consists of Air Force GeoBase documents that provide direction on how to collect and maintain a geospatial data layer. The documents provide guidance for appropriate collection methods, required attribution, required spatial and temporal resolution, as well as defining the implementing authorities for that layer.
Regional Installation Picture (RIP)	The Regional Installation Picture (RIP) is the collection of geospatial information, including imagery, which depicts features outside the installation boundary to support mission requirements excluding targeting and combat operations. The RIPs created by Strategic GeoBase enable quick visualizations of environmental or infrastructure constraints, and can be used to analyze and visually portray existing and potential encroachment, expansion possibilities, as well as other related issues.

TERM	DEFINITION

Spatial Data Standards for Facilities, Infrastructure and Environment (SDSFIE)	Non-proprietary Department of Defense (DoD) spatial standards that supports common implementation for installations, environment, and civil works missions. The Spatial Data Standards for Facilities, Infrastructure and Environment (SDSFIE) data model is recognized as an enterprise standard across the entire DoD business mission area.
Strategic GeoBase	Strategic GeoBase is a GeoBase visualization capability depicting a broader regional installation view, emphasizing interactions between an installation and surrounding communities as well as interactions between United States Air Force (USAF) and other Department of Defense (DoD) installations and can be typically considered as a wider scoped, lower fidelity version of Garrison GeoBase. Strategic GeoBase is comprised of all geospatial data produced in the USAF and aggregated at the Headquarters USAF (HAF) level. It offers the enhanced means to visualize Air Force installation data through links with other HAF level databases combined with detailed imagery at the HAF.

APPENDIX E: List of Acronyms

ACC	Air Combat Command
AETC	Air Education and Training Command
AF	Air Force
AFB	Air Force Base
AFDW	Air Force District of Washington
AFGSC	Air Force Global Strike Command
AFI	Air Force Instruction
AFMC	Air Force Materiel Command
AFRC	Air Force Reserve Command
AFSOC	Air Force Special Operations Command
AFSPC	Air Force Space Command
AMC	Air Mobility Command
AMP	Activity Management Plan
ANG	Air National Guard
AOR	Area of Responsibility
AWG	Architecture Working Group
CE	Civil Engineering
CIP	Common Installation Picture
CONOPS	Concept of Operations
DGMP	DISDI Geospatial Metadata Profile
DIACAP	DoD Information Assurance Certification and Accreditation Process
DISDI	Defense Installation Spatial Data Infrastructure
DRU	Direct Reporting Unit
DoD	Department of Defense
EA	Enterprise Architecture
ESS/FP	Expeditionary Site Selection/Force Protection
FDS	Functional Data Steward
FOA	Field Operating Agency
FOL	Forward Operating Location
GIO	Geo-Integration Office
GI&S	Geospatial Information and Services
IC3OP	Installation Control Center Common Operational Picture
IGI&S	Installation Geospatial Information and Services
IT	Information Technology
MAJCOM	Major Command
NexGen IT	Next Generation Information Technology
OPR	Office of Primary Responsibility
OSD	Office of the Secretary of Defense
PACAF	Pacific Air Forces
RIP	Regional Installation Picture
SDSFIE	Spatial Data Standards for Facilities, Infrastructure and Environment
TCC	Transportation Control Center
TDY	Temporary Duty
USAF	United States Air Force
USAFA	United States Air Force Academy
USAFE	United States Air Forces in Europe

2011 U.S. Air Force Civil Engineering

GeoBase Strategy Document

Build to Last...Lead the Change